Application Serial No.: 10/627,143 Docket No.: N.C. 84,766
Applicant(s): Spector et al.

Amendments to the Specification:

Please replace the Abstract with the following amended Abstract:

The use of sugar-containing hydrogels as very highly porous, aqueous support material for the immobilization of oligonucleotides, peptides, proteins, antigens, antibodies, polysaccharides, and other biomolecules for sensor applications. Unusually large sizes of interconnected pores allow large target molecules to pass rapidly into and through the gel and bind to immobilized biomolecules. Sugar-containing hydrogels have extremely low non-specific absorption of labeled target molecules, providing low background levels. Some hydrogel materials do not have this type of homogeneous interconnected macroporosity, thus large target molecules cannot readily diffuse through them. Additionally, they nearly always experience non-specific absorption of labeled target molecules, limiting their usefulness in sensor applications. A method is provided for preparing sugar polyacrylate hydrogels with functional chemical groups which covalently bond oligonucleotides and peptides. A method for copolymerizing acrylate- terminated oligonucleotides with sugar acrylate monomers and diacrylate cross-linking agents is also provided.